

$^{181}\text{Ta}(p,d)$ 2002We01,1983Wa01

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	E. A. Mccutchan	NDS 126, 151 (2015)	1-Feb-2015

$J^\pi(^{181}\text{Ta})=7/2^+$.

2002We01: E(p)=22 MeV. Measured deuteron spectra at 40° with Q3D spectrometer (FWHM=4 keV).

1983Wa01, 1979Wa05, 1978Wa17: E(p)=19 MeV. Measured $\sigma(\theta)$ using magnetic spectrometer and four solid state position sensitive detectors (FWHM \leq 15 keV); DWBA analysis.

Others: 1974KhZX, 1975IsZW.

Additional information 1.

 ^{180}Ta Levels

E(level) [†]	J^π [†]	L [‡]	C ² S [#]	E(level) [†]	J^π [†]	L [‡]	C ² S [#]	E(level) [†]	J^π [†]	L [‡]	C ² S [#]
0.0 ^a	1 ⁺	4	1.4	576.8 ^b	6 ⁻	3	0.67	808.5 ^f	(5 ⁻)		
39.8 ^a	2 ⁺	4	1.7	596.6 ^a	10 ⁺			836.4 ^e	5 ⁻	3	0.67
78.0 10	9 ⁻			600.3 ^a	7 ⁺			876.5 ^f	(2 ⁻)		
111.1 ^a	3 ⁺	6	1.7	646.3 ^d	(4 ⁻)			884.5			
178.9 ^a	8 ⁺	5(+6)	0.91 [@]	654.1				891.3			
185.6 ^a	4 ⁺		0.91	658.4 ^b	(4 ⁻)	3	1.1 ^{&}	895.0			
310.8 ^a	5 ⁺	6	0.91	663.3 ^d	(4 ⁻)		1.1	907.7 ^e	4 ⁻	1	1.2
375.8 ^a	9 ⁺	6	1.2	680.5				914.5			
416.5 ^a	6 ⁺			682.7 ^c	8 ⁻			952.6			
423.2 ^b	1 ⁻	3	0.77	717.3				973.0			
425.8				722.3 ^e	4 ⁻	1	1.1	977.3 ^b	8 ⁻		
465.2 ^c	7 ⁻			733.4				986.2			
477.4 ^b	2 ⁻	3	1.2	758.1				1003.7			
544.0 ^b	3 ⁻	3	0.83	763.6 ^b	7 ⁻	3	1.0	1062.6			
548.4 ^d	3 ⁻			784.0 ^d	(5 ⁻)			1075.9			
572.2				788.0 ^e	3 ⁻	1	1.0	1080.0			

[†] From 2002We01.

[‡] From comparison of measured angular distributions with DWBA calculations (1983Wa01).

[#] C²S=(1/N) ($\sigma(\text{exp})/\sigma(\text{DWBA})$), N=2.29 (1983Wa01).

[@] Possible contribution from the 186, $J^\pi=4^+$ level.

[&] Possible contribution from the 663, $J^\pi=(4^-)$ level.

^a 9/2⁺[624] neutron transferred.

^b 5/2⁻[512] neutron transferred.

^c 7/2⁻[514] neutron transferred.

^d 1/2⁻[510] neutron transferred.

^e 1/2⁻[521] neutron transferred.

^f 3/2⁻[512] neutron transferred.